

## Editorial

# Rethinking positivism in social research: Lessons from the Hawthorne experiments and the rise of action research

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### To cite this article:

Gunbayi, I. (2026). Rethinking positivism in social research: Lessons from the Hawthorne experiments and the rise of action research. *Journal of Action Qualitative & Mixed Methods Research*, Volume 5 (Issue 1), 1-6  
DOI: <https://doi.org/10.5281/zenodo.19450254>  
[www.jaqmeronline.com](http://www.jaqmeronline.com)

**Article Information:** Received: September 6<sup>th</sup>, 2025, Accepted: February 27<sup>th</sup>, 2026, Published: April 1<sup>st</sup>, 2026

**Abstract.** Based on its historical roots to Auguste Comte’s vision of a “science of society” patterned on the natural sciences, this editorial scrutinizes the limitations of positivism in social research. Besides, it is explained how efforts to prove causal laws in human behavior were unsuccessful focusing on the Hawthorne experiments (1924–1932), when social meaning and action emerged as principal variables. As a participatory alternative combining knowledge generation with practical transformation, Kurt Lewin’s creation of action research is explained. Emphasizing trustworthiness, multiple realities, and value-added inquiry, positivist assumptions, based on opposite theoretical critiques by Ernest G. Guba and Yvonna S. Lincoln are also questioned. Accordingly, a paradigm shift from reductionist methodologies of natural sciences based on radical structuralist and functionalist paradigms toward participatory and context-based approaches based on interpretive and radical humanist paradigms are underlined via these perspectives and views. The paper concludes that the future of social research lies in accepting complexity, collaboration, and the lived experiences of participants rather than seeking universal laws detached from human context.

**Keywords:** Positivism, Hawthorne effect, action research, social science methodology, constructivism, research paradigms

## Introduction

Social scientists have debated whether the model of natural sciences should be followed in human sciences for more than a century or not. August Comte, the founder of positivism, claimed that social phenomena should be researched via systematic observation, causal laws and generalization similar to physical objects. As Comte (2000/1896) wrote, “All good intellects have repeated, since Bacon’s time, that there can be no real knowledge but that which rests upon observed facts.” (p.29)

However, the application of positivist research methods to social research usually has been limited. The Hawthorne experiments, designed to prove the causal relation between workplace conditions and productivity, revealed that human behaviors were not likely to be reduced only to outward physical conditions. Instead, employees’ performance was increased and improved not due to measurable variables of illuminating and rest breaks, but they felt themselves valued and observed (Dickson & Roethlisberger, 2003/1939).

Kurt Lewin put forward a solution to those limitations by pioneering and creating action research, a methodology combining participation with problem solving (Marrow, 1969; Gunbayi, 2024). As Lewin famously asserted, “...intergroup relations cannot be solved without altering certain aspects of

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conduct...” (Lewin, 1946, p. 44). This approach changed the role of individuals or participants from passive “subjects” to active participants.

Guba & Lincoln’s theoretical critiques reinforced this approach and shift. Guba (1981) argued that the criteria of conventional inquiry-internal and external validity, reliability, and objectivity-are inadequate for naturalistic settings. Lincoln and Guba (1985) insisted that “realities are multiple, constructed, and holistic” (p. 37), a position opposed to positivism’s claim to a single objective truth.

This paper criticizes the application of positivism in social sciences, scrutinizes Hawthorne experiments as an empirical failure of that paradigm, emphasizes the ever-lasting value of Lewin’s action research and the constructivist transformation advocated by Guba & Lincoln.

## Methodology

This study employs a qualitative descriptive analysis grounded in a comprehensive review of literature, conceptualized as a subtype of systematic review methodology. Within an interpretive paradigm, a literature review is characterized as a structured and systematic process aimed at the identification, collection, critical evaluation, and synthesis of existing scholarly work (Gunbayi, 2020; Baumeister & Leary, 1997; Cooper, 1998). Therefore, the purpose of this article is to scrutinize the limitations of positivism in social research focusing on the Hawthorne experiments based on subheadings:

1. Positivist paradigm and Comte’s legacy,
2. Hawthorne studies and the limits of positivism,
3. Theoretical critiques of positivism,
4. Lincoln & Guba on competing paradigms,
5. Kurt Lewin and the invention of action research,
6. Experimental action research in contemporary context.

## Results

Based on a literature review of the Hawthorne experiments and action research, this chapter covers positivist paradigm and Comte’s legacy, Hawthorne studies and the limits of positivism, theoretical critiques of positivism, Lincoln & Guba on competing paradigms, Kurt Lewin and the invention of action research and experimental action research in contemporary context.

### *The positivist paradigm and Comte’s legacy*

Auguste Comte sought to establish sociology as a scientific discipline by applying methods of observation and classification from the natural sciences (2000/1896). In his ‘*The Positive Philosophy of Auguste Comte*’ Comte (2000/1896) declared:

“The law is this: that each of our leading conceptions-each branch of our knowledge-passes successively through three different theoretical conditions: the Theological, the Metaphysical, and the Scientific, or Positive.” (p. 27)

For Comte, the “positive” stage represented the highest form of knowledge, grounded in empirical observation and freed from speculation. His goal was to build a science of society capable of producing general laws, similar to physics or biology.

This vision influenced early twentieth-century industrial research, where workers were studied as if they were machines. As Dickson & Roethlisberger (2003/1939) noted in their classic study, management science sought to “control of all the factors affecting work performance” (p. 14) to maximize efficiency. Yet, this reductionist approach decontextualized human experience, ignoring social meaning and agency. The positivist assumption that human behaviour could be explained entirely through controlled variables would soon be undermined by the results of the Hawthorne experiments by marking a turning

point, revealing the limitations of positivism and paving the way for more interpretive and human-centred approaches within the social sciences.

### ***Hawthorne studies and the limits of positivism***

Six sets of Hawthorne experiments in addition to mass interviewing program first based on questionnaires via direct approach and then qualitative interviews via indirect approach (1928-1931) during the course of experiments as the illumination studies (1924-1927), the first relay assembly experiments (1927-1933), the second relay assembly experiments (1928-1929), the bank wiring experiments (1931-1932), mica splitting experiments (1928-1930) and bank wiring room experiments (1931-1932) at Western Electric's plant aimed to establish causal relationships between environmental changes and worker productivity. (Dickson & Roethlisberger (2003/1939) When productivity rose regardless of whether conditions improved or worsened in experiments, the researchers were puzzled.

Dickson & Roethlisberger (2003, 1939) concluded that the changes were not due to lighting or breaks, but to the "everything pointed to the need for more research on employee attitudes and the factors to which they could be related" (p. 141). Workers responded to the feeling of attention and recognition, not to the experimental manipulations themselves.

This was the "Hawthorne effect," and it highlighted the core limitation of positivism: people are not passive objects that respond mechanically to external changes. They are meaning-making agents embedded in social contexts as Sonnenfeld (1985) summarized, "The Hawthorne studies yielded some insights into the psychological underpinning of institutional analysis and the implications of institutional factors on small group and individual behaviour. This more social-psychological perspective very much threatened the role of traditional sociology." (p. 126).

As Sonnenfeld (1985) explained, this perspective introduced a more social-psychological and institutional understanding of behaviour, indicating a critical leaving from traditional positivist paradigms and giving the way for more human-centred approaches in the social sciences.

### ***Theoretical critiques of positivism***

#### ***Guba on Trustworthiness***

Guba (1981) directly questioned the adequacy of positivist criteria for judging research quality. He wrote:

"...naturalistic inquiry is defined and differentiated from the rationalistic mode of inquiry commonly practiced in the past and still dominating today..." (p. 76)

Instead of internal validity and reliability in quantitative researches based on positivism and post-positivism, Guba (1981) proposed more context-sensitive and interpretive procedures such as credibility and transferability and recognized that understanding human experience requires attention to meaning, context, and multiple realities rather than relying only on objective measurement, which both broadened the methodological foundations of qualitative research but also reinforced the acceptability of naturalistic inquiry.

#### ***Lincoln & Guba on competing paradigms***

In *Naturalistic Inquiry*, Lincoln and Guba (1985) argued positivist and naturalist paradigm:

"Positivist paradigm: There is a single tangible reality "out there" fragmentable into independent variables and processes, any of which may be studied independently of the others; inquiry can converge onto that reality until, finally, it can be predicted and controlled. ...Naturalistic paradigm: There are multiple constructed realities that may be studied only holistically; inquiry into these multiple realities

will inevitably diverge so that prediction and control are unlikely outcomes, although some level of understanding may be achieved..." (p. 37)

Later, in their influential essay *Competing Paradigms in Qualitative Research*, they emphasized that positivism denies the role of human values and culture:

"...if a "real" world is assumed, then what can be known about it is "how things really are" and "how things really work." Then only those questions that relate to matters of "real" existence and "real" action are admissible; other questions, such as those concerning matters of aesthetic or moral significance, fall outside the realm of legitimate scientific inquiry..." (Lincoln & Guba, 1994, p. 108)

These critiques resonate directly with the lessons of the Hawthorne experiments, which showed that human behaviour cannot be understood in isolation from its social and cultural setting like experiments on animals, plants and matters in laboratory.

### ***Kurt Lewin and the invention of action research***

Kurt Lewin recognized that positivist approaches failed to capture the dynamics of human groups. He proposed action research as an alternative. In his seminal 1946 article, he wrote:

"...mere diagnosis -and surveys are a type of diagnosis- does not suffice. In intergroup relations as in other fields of social management the diagnosis has to be complemented by experimental comparative studies of the effectiveness of various techniques of change... The research needed for social practice can best be characterized as research for social management or social engineering. It is a type of action-research, comparative research on the conditions and effects of various forms of social action, and research leading to social action. Research that produces nothing, but books will not suffice..." (Lewin, 1946, p. 35- 37)

Lewin's model involved a cycle of planning, action, and fact-finding. Unlike the detached observation of positivism, action research required collaboration between researchers and participants. Marrow (1969) explained that Lewin "was to pioneer in a double sense and give a new turn to the theory and practice of the behavioural sciences" (p. 84).

By engaging participants as co-researchers, Lewin shifted the epistemological foundation of inquiry. Workers, students, or community members were no longer treated as passive "subjects" but as partners in problem-solving. Thus, by developing a more democratic, dynamic, and problem-solving orientation which continues to influence contemporary social and educational research, the detachment of positivism is questioned via action research.

### ***Experimental action research in contemporary context***

The fact that experimental action research has become a preferred methodology in modern social, behavioural, and health sciences are emphasized by Gunbayi (2025) since action research accepts complexity and includes participation. He summarizes that "By combining empirical data with experiential knowledge, action research enhances both the validity and applicability of findings in practice-based disciplines" (p. 6).

For instance, teachers and students co-create approaches to make better learning outcomes in education. Practitioners involve patients in shaping interventions in healthcare. Employees participate in diagnosing and solving workplace problems in organizational settings.

Action research integrates knowledge with action, respecting the lived realities of participants different from Comte's positivism assuming detached objectivity. Consequently, the principle of participation

both enriches the research process and supports meaningful and sustainable transformation in practical settings.

## Results and Discussion

The fundamental weakness of positivist methodology in the social sciences was discovered via Hawthorne studies: reducing human beings to subjects isolated from the meaning, context, and social dimensions that essentially shape behaviour. Comte's idea of a "science of society" modelled on physics (2009/1865), (2000/1896) was proved inadequate in practice in social sciences.

Criteria of trustworthiness that regards multiplicity, context, and values must be adopted to inquiries into human life as argued by Guba (1981) and Lincoln & Guba (1985, 1994). A methodological breakthrough, placing participants at the centre of knowledge production were offered via Kurt Lewin's discovery of action research.

In the preface of 'The practical theorist: The life and work of Kurt Lewin', Marrow (1969) stated that "No action without research; no research without action" (p. ix). This principle is adopted with action research by combining theoretical rigor with real-world change. The future of social research will not be in positivist reductionism but in participatory, experimental, and context-sensitive methodologies respecting individuals as participants and communities as stakeholders.

The influence of Auguste Comte's positive paradigm on social sciences and how this approach has been critiqued and transformed over time are summarized in this article. Primarily, positivism, trying to examine social phenomena like the natural sciences and find universal laws, has been questioned as a result of Hawthorne experiments as the complexity of human behaviour and the importance of social factors are ignored in these experiments. The assumption of objective reality was challenged and context-sensitive criteria such as credibility and transferability for validity, dependability and confirmability for reliability were emphasized by theorists such as Egon Guba and Yvonna S. Lincoln. Additionally, the purpose of social research has been shifted from passive observation to active collaboration and participatory methodologies integrating theory and practice with the development of approaches such as Kurt Lewin's action research. Collectively, these texts illustrate the paradigm shift in the social sciences from mechanistic, control-oriented approaches to human-centred, interpretive, and contextual approaches.

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### **Conflicts of interest**

No conflicts of interest are declared by the author.

### **Author Contribution**

Corresponding author Ilhan Gunbayi: Conceptualization, data refinement, research, methodology, original drafting, review, and editing

### **Conflict of Interest Statement**

This research has not received any specific grants from funding agencies in the public, commercial, or non-profit sectors.

### **Ethics Approval**

In the writing process of the study titled "**Rethinking positivism in social research: Lessons from the Hawthorne experiments and the rise of action research**", scientific, ethical and citation rules were followed; It is committed by the author of this study that no falsification has been done on the data collected. It accepts that "Journal of Action Qualitative & Mixed Methods Research and Editor" has no responsibility for all ethical violations that may be encountered, that all responsibility belongs to the author and that the study has not been submitted to any other academic publication environment for evaluation.

### **Institutional review board (IRB) approval**

Institutional Review Board (IRB) is not required for this research.

### **Data Availability Statement**

Anonymized data from this study can be used upon request [jaqmer.editor@gmail.com](mailto:jaqmer.editor@gmail.com)